

CLAIMS

What is claimed is:

1. A method for immobilizing a target with a stimulus signal coupled to the target via electrodes; the method comprising:
 - a step for providing the stimulus signal in accordance with a strike stage;
 - a step for providing the stimulus signal in accordance with a hold stage; and
 - a step for providing the stimulus signal in accordance with a rest stage.
2. The method of claim 1 wherein:
 - the stimulus signal during the strike stage comprises a first repetition rate; and
 - the stimulus signal during the hold stage comprises a second repetition rate less than the first repetition rate.
3. The method of claim 1 wherein:
 - the stimulus signal during the strike stage comprises a first pulse that delivers a first charge to the target; and
 - the stimulus signal during the hold stage comprises a second pulse that delivers a second charge to the target less than the first charge.
4. The method of claim 1 wherein the stimulus signal during the strike stage has a peak voltage less than an ionization potential.
5. The method of claim 1 further comprising a step for conditionally providing a path formation stage, wherein the stimulus signal is provided in accordance with whether the path formation stage preceded the strike stage.
6. The method of claim 1 wherein the step of providing the stimulus signal in a strike stage comprises a step for providing a series of pulses having a pulse repetition rate in a range of about 5 pulses per second to about 50 pulses per second, and providing at least one pulse of the series at a peak voltage less than an ionization potential to deliver a charge in a range of about 20 microcoulombs to about 1355 microcoulombs.
7. The method of claim 6 wherein each pulse delivers a charge in a range of about 50 to 150 microcoulombs.
8. The method of claim 6 further comprising a step for reversing the polarity of consecutive pulses in the series.

9. A circuit for immobilizing a target, the circuit comprising:
- a charge storage circuit; and
 - a processor circuit that obtains a first value corresponding to an initial charge stored in the charge storage circuit, couples the charge storage circuit to the target for discharging the charge storage circuit and delivering a charge into the target, obtains a second value corresponding to a current quantity of charge stored in the charge storage circuit, and limits discharging after delivery of a predetermined charge is indicated in accordance with the first value and the second value.
10. The circuit of claim 9 wherein the predetermined charge is in a range of about 20 to 1355 microcoulombs.
11. The circuit of claim 9 wherein the predetermined charge is in a range of about 50 to 150 microcoulombs.
12. A projectile comprising the circuit of claim 9.
13. A system for immobilizing a target, the system comprising a launch device and a projectile comprising the circuit of claim 12.
14. A circuit for immobilizing a target, the circuit comprising:
- a charge storage circuit; and
 - a processor circuit that couples the charge storage circuit to the target to discharge the stored charge through the target via a series of pulses for continuous muscle contraction, each pulse of the series having a peak voltage magnitude less than about 500 volts, each pulse completed after a voltage monitored by the processor circuit crosses a threshold voltage magnitude, the threshold voltage magnitude being in accordance with delivery of a predetermined charge in a period of time ranging from about 20 to about 500 microseconds, the repetition rate of the series of pulses ranging from about 5 to about 50 pulses per second.
15. The circuit of claim 9 wherein the predetermined charge is in a range of about 20 to 500 microcoulombs.
16. The circuit of claim 9 wherein the predetermined charge is in a range of about 50 to 150 microcoulombs.
17. A projectile comprising the circuit of claim 14.
18. A system for immobilizing a target, the system comprising a launch device and a projectile comprising the circuit of claim 17.